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Abstract of the Disclosure

Disclosed methods can be used to detect the existence and location of a fault in a structure such as a building or house. Such fault can be due to damage or deterioration to structure elements, or can be due to improper use, design, or assembly, for example. The methods use optical sensing to detect vibration from a structure. The sensed vibration is highly dependent upon the condition of the structure elements, so that the existence and location of a fault in the structure can be readily detected.